4. Set the dipswitches to LP ON (or HP ON if using high-output emitters). Set NET ON at one of the IRD4s and NET OFF on the other one.
5. Plug a power supply into only ONE of the IRD4s.
6. All components should now be controllable from either room.

Note: *Up to ten IRD4s may be wired into other rooms on the same IR network. In every case, be sure only ONE of the dipswitches on the network is set to the NET ON position – all the others must be set to NET OFF!*

High-Output Emitter Operation

Fig. 5 shows a typical basic system using the ELAN IRE3 High-Output Emitter to control a stack of components.

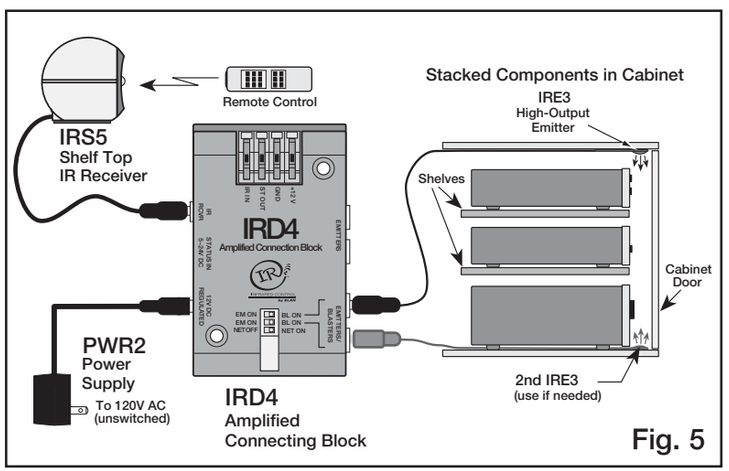

Fig. 5

1. Plug the IRE3 High-Output Emitter into the LP/HP IR OUT port on the ELAN IRD4 (see Fig. 5).
2. Set the dipswitch on the unit to the HP ON position.

CAUTION: *The HP ON position sets the IRD4 to high output power. Be sure to return the dipswitch to LP ON position when driving normal mini-emitters. Failure to do so will damage the emitters!*

3. Connect power to the IRD4. Assuming other system connections have been properly made, the components will now respond to high-output emitter control.

Note: *Use a PWR3 Power Supply when connecting two or more high-output emitters.*

Power Requirements

DEVICE	CURRENT DRAW
IRE1	6mA
IRE1D	12mA
IRE2	6mA
IRE2D	12mA
IRE3	12mA
IRE4	6mA
IRS1	6mA
IRS2	6mA
IRS3	6mA
IRS4	6mA
IRS5	6mA
IRS6	6mA
IRS7EP	12mA
IRS8EP	12mA

Power Supply Note: *The ELAN PWR2 12VDC 200mA Power Supply is adequate for most installations using only ELAN IR sensors. However, if you use one or more keypads in the system, be sure to add up all the currents for each keypad, IR sensor, IR emitter and High-Output emitter (if used) and determine the total current (see specifications for the keypads, IR sensors, etc.). If the total current exceeds 200mA, then the ELAN PWR3 +12VDC 1.5A power supply should be used.*

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ELAN HOME SYSTEMS, L.L.C (ELAN) warrants this product to be free from defects in materials and workmanship for five (5) years from date of purchase. If within the warranty period purchaser discovers such item was not as warranted above and promptly notifies ELAN in writing, ELAN shall repair or replace the items at the company's option. This warranty shall not apply (a) to equipment not manufactured by ELAN, (b) to equipment which shall have been installed by other than an authorized ELAN installer, (c) to installed equipment which is not installed to ELAN's specifications, (d) to equipment which shall have been repaired or altered by others than ELAN, (e) to equipment which shall have been subjected to negligence, accident, or damage by circumstances beyond ELAN's control, including, but not limited to, lightning, flood, ,electrical surge, tornado, earthquake, or any other catastrophic events beyond ELAN's control, or to improper operation, maintenance or storage, or to other than normal use of service. With respect to equipment sold by, but not manufactured by ELAN, the warranty obligations of ELAN shall in all respects conform and be limited to the warranty actually extended to ELAN by its supplier. The foregoing warranties do not cover reimbursement for labor, transportation, removal, installation, or other expenses which may be incurred in connection with repair or repacement.

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P/N 224250 X2

INFRARED CONTROL
by ELAN

IRD4

Amplified IR Connection Block

Introduction

The ELAN IRD4 is a single input, four output Amplified IR Connection Block designed to provide a convenient way of interconnecting IR control products. This unit includes a robust, wide-bandwidth amplifier with reverse voltage protection so that it has the ability to drive both mini-emitters and high-output emitters reliably.

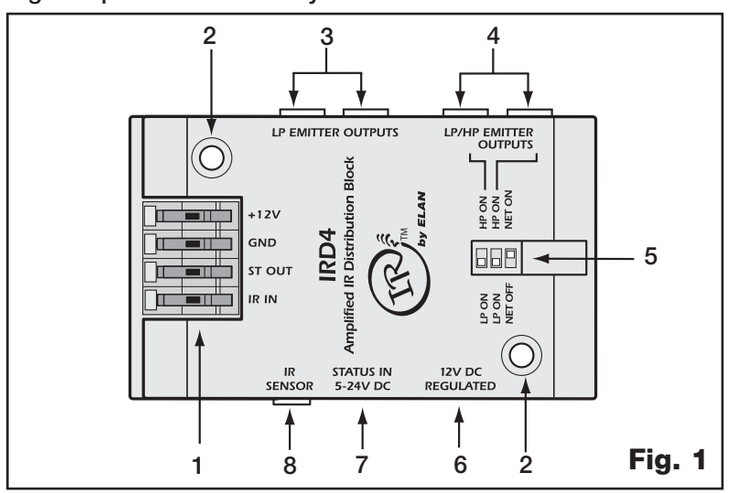

Fig. 1

Features (Refer to Fig. 1)

1. **Connection Terminals** accept wire sizes 14 to 28 AWG for connection of:
   - **+12V DC**-Powers connected IR sensors, keypads, etc.
   - **GND**-Return for Power, IR signal and STATUS indicators
   - **ST OUT**-Connects STATUS voltage to STATUS indicators on IR sensors, keypads, etc.
   - **IR IN**-Receives IR control signals from IR sensors, keypads, etc.
2. **Mounting Holes**-Attach the IRD4 to any flat surface using the two screws provided.
3. **LP IR OUT**-Two 3.5mm jacks drive two emitters at low power.

4. LP/HP **IR OUT**-Two 3.5mm jacks drive two mini-emitters at low power or two high-output emitters at high power.
5. **Dipswitches:**
   - **LP ON/HP ON**-Switches between low power and high power on LP/HP IR OUT connectors.
   - **NET OFF/NET ON**-allows the IR IN and IR SENSOR inputs to be terminated with a 500Hz resistor (NET ON), or un-terminated (NET OFF). The NET ON position should be chosen when using long lengths of wire (over 50') between the IR sensor, keypad, etc., and the IRD4. If using two or more IRD4s in a parallel network system (see Fig. 4), be sure only ONE of the IRD4 terminators is set to the NET ON position.

CAUTION: *The HP ON position causes the IRD4 to produce a high-output signal. Be sure to return the dipswitch to LP ON position when driving mini-emitters. Failure to do so will damage the emitters!*

6. **12V DC REGULATED**-Connect PWR2 Power Supply.
7. **STATUS IN 5-24V DC**-2.1mm jack, **TIP = +**, **Sleeve = -** GND accepts 5V through 24VDC power dupply. Provides power for STATUS indicators on keypads, IR sensors, etc.
8. **IR SENSOR**-Use included cable to connect IR sensors to the IRD4.

Stand-Alone System Connections

Note: *For ELAN system connections, please refer to the appropriate ELAN Multi-Room Controller's installation manual.*

A. Basic System

Fig. 2 shows a typical stand-alone IR routing application. A single IR sensor is being routed to three IR devices.

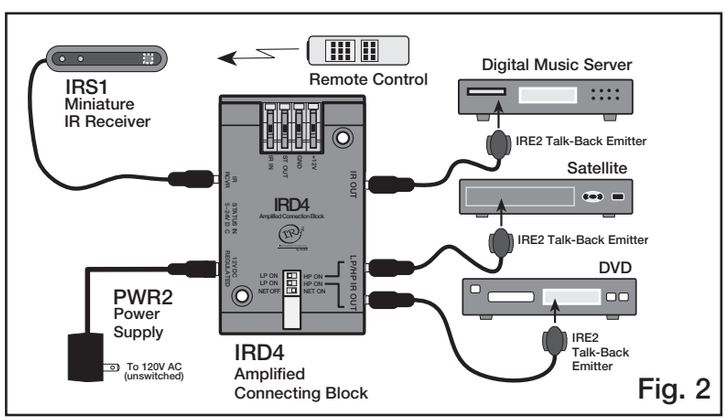

Fig. 2

1. Plug in the IR sensor and emitters as shown.

   Note: *Since the IRD4 employs emitter current sharing, you may use ELAN IRE1, IRE1D, IRE2, IRE2D, IRE3, and/or IRE4 IR Emitters in any combination. Other standard 12V IR emitters can also be used.*

2. Set the dipswitches to LP ON and NET ON or NET OFF (see p. 2).
3. Connect the power supply.
4. The IRD4 system should now control the components.

B Multi-Room System

See Fig. 3 for an example of a multi-room (not multi-zone) system. Three remotely located IR sensors and one local IR sensor are routed to three IR devices.

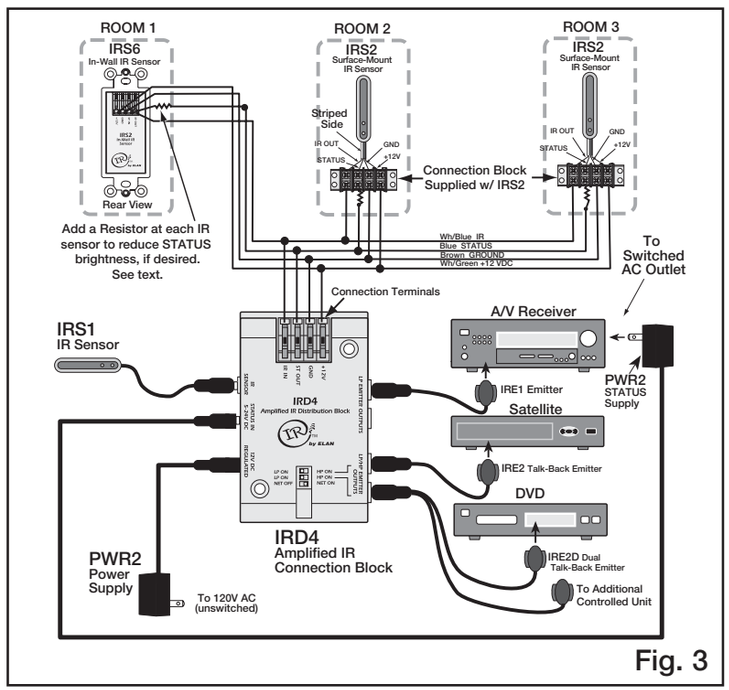

Fig. 3

1. Pull Cat-5 wire from each room (home runs) to the IRD4 near the controlled components.

   Note: *MAX DISTANCE of ALL Wire Runs is 2000 ft using Cat-5 cable. When using long lengths, the dipswitch must be set to the NET ON position and a 500 Ohm resistor must be used (see p. 2).*

2. Connect IR sensors in each room to the wire runs as shown.

3. Connect the wires from each of the IR sensors to the appropriate connection terminals on the IRD4.
4. Connect the various emitters to the IRD4.
5. Set the dipswitches to LP ON (or HP ON if using high-output emitters) and NET ON.
6. Plug the local IR sensor into the IR SENSOR jack.
7. Plug in the power supply.
8. The IRD4 should now control the components.

STATUS Brightness

Fig. 3 also shows how a resistor can be added to reduce the brightness of the STATUS LED's on ELAN IR sensors. In this example, a PWR2 12VDC Power Supply is used to indicate ON/OFF status of an AV Receiver. Choose a resistor value that achieves the desired brightness (about 2.2k to 12k, 1/8 W). Connect it in series with the STATUS terminal on each IR sensor, as shown.

Bi-Directional IR Control

Fig. 4 is an example of a two-room system using two IRD4s for bi-directional control on a common IR network. This type of connection permits IR sensors or keypads located in each room to control the sources in both rooms, whether local or remotely located.

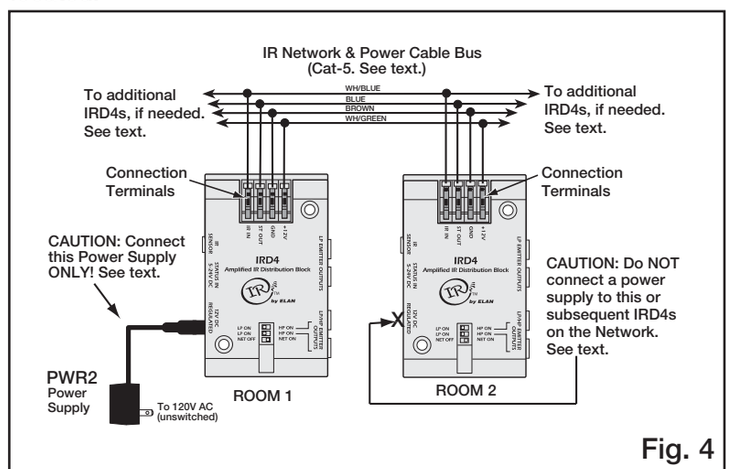

Fig. 4

1. Pull Cat-5 wire between each room and connect to the IRD4s as shown.
2. Connect the local IR sensors in each room to the IR SENSOR jacks or in parallel with the Cat-5 runs at the IRD4 connection terminals.
3. Plug the various emitters into both IRD4s